WASTE MANAGEMENT

WASTE MANAGEMENT OF ILLINOIS, INC.
601 Madison Road
East St. Louis, Illinois 62201
(618) 271-6788
(618) 271-1227 Fax

February 4, 2013

Illinois Environmental Protection Agency
Bureau of Air – Compliance Section #40
1021 North Grand Avenue East
Springfield, Ill 62702

163075AAL – St. Clair County
Cottonwood Hills Recycling and Disposal Facility

NSPS Semi-Annual Report for Period July 1, 2012 to December 31, 2012

Dear Sirs:

This letter transmits the NSPS Semi-Annual Report for the above referenced reporting period at the above referenced facility.

If you have any questions or require additional information, please call me at (618) 857-7160 or (314) 568-2025.

Sincerely,
Waste Management of Illinois, Inc.

Ernest H Dennison, PE
District Engineer

cc: IEPA – Collinsville Field Office
2009 Mall Street
Collinsville, Illinois 62234

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL -- PERMIT SECTION
P.O. BOX 19506
SPRINGFIELD, ILLINOIS 62794-9506

FOR APPLICANT'S USE
Revision #: _____
Date: ____ / ____ / ____
Page _____ of _____
Source Designation: _____

COMPLIANCE AND GENERAL REPORTING FORM	***FOR AGENCY USE ONLY***
	ID NUMBER:
	PERMIT #:
	DATE:

THIS FORM IS USED FOR EITHER OF THE FOLLOWING:

- TO REPORT AND CERTIFY COMPLIANCE OF AN ENTIRE SOURCE OR SPECIFIC ITEMS OF EQUIPMENT WITH ALL APPLICABLE REQUIREMENTS DURING A REPORTING PERIOD, OR
- TO IDENTIFY AND ENSURE PROPER PROCESSING OF A SUBMITTED REPORT. THIS FORM SHOULD BE USED AS THE COVER SHEET OF THE SUBMITTED REPORT.

SOURCE INFORMATION

1) SOURCE NAME:
Cottonwood Hills Recycling and Disposal Facility

2) DATE FORM PREPARED:	3) SOURCE ID NO. (IF KNOWN):
February 2013	**163075AAL**

GENERAL INFORMATION

4) INDICATE FOR WHICH OF THE FOLLOWING THIS FORM IS BEING COMPLETED:

☒ **TO REPORT AND CERTIFY COMPLIANCE OF THE SOURCE OR SPECIFIC ITEMS OF EQUIPMENT WITH ALL APPLICABLE REQUIREMENTS**

☐ **TO IDENTIFY AND ENSURE PROPER PROCESSING OF A SUBMITTED REPORT**

5) PERIOD COVERED BY THIS REPORT:

FROM: 07 / 01 /2012 TO: 12 / 31 / 2012

6) NAME AND PHONE NUMBER OF PERSON TO CONTACT FOR QUESTIONS REGARDING THIS REPORT:

NAME: **Ernest Dennison** TITLE: **District Engineer**

PHONE#: (**618**) **857-7160** EXT:____ or **(314) 568-2025**

THIS AGENCY IS AUTHORIZED TO REQUIRE THIS INFORMATION UNDER ILLINOIS REVISED STATUTES, 1991, AS AMENDED 1992, CHAPTER 111 1/2, PAR. 1039.5. DISCLOSURE OF THIS INFORMATION IS REQUIRED UNDER THAT SECTION. FAILURE TO DO SO MAY PREVENT THIS FORM FROM BEING PROCESSED AND COULD RESULT IN THE APPLICATION BEING DENIED. THIS FORM HAS BEEN APPROVED BY THE FORMS MANAGEMENT CENTER.

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_____

APPLICATION PAGE _____

WM01425

COMPLIANCE OF SOURCE OR EQUIPMENT DURING REPORTING PERIOD

- COMPLETE ITEM 7 BELOW IF THIS FORM IS BEING USED TO REPORT AND CERTIFY COMPLIANCE OF THE ENTIRE SOURCE.
- COMPLETE ITEM 8 BELOW IF THIS FORM IS BEING USED TO REPORT AND CERTIFY COMPLIANCE OF SPECIFIC ITEMS OF EQUIPMENT ONLY.

7) WAS THE SOURCE IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS FOR THE ENTIRE REPORTING PERIOD? [X] YES [ ] NO

IF YES, THEN THE "REPORT INFORMATION" SECTION ON PAGE 3 OF THIS FORM DOES NOT NEED TO BE COMPLETED.

IF NO, THEN COMPLETE AND SUBMIT FORM CAAPP-405 -"EXCESS EMISSIONS, MONITORING EQUIPMENT DOWNTIME, AND MISCELLANEOUS REPORTING FORM."

8a) LIST THE EMISSION UNIT(S) AND CONTROL EQUIPMENT FOR WHICH THIS FORM IS BEING COMPLETED TO REPORT AND CERTIFY COMPLIANCE WITH (IF ADDITIONAL SPACE IS NEEDED FOR ITEM 10, ATTACH AND LABEL AS EXHIBIT 400-A):

See Attached Report.

b) IDENTIFY THE APPLICABLE REQIREMENT(S) FOR WHICH THIS FORM IS BEING USED TO REPORT AND CERTIFY COMPLIANCE WITH:

See Attached Report.

c) IDENTIFY THE APPLICABLE REQIREMENT(S) WHICH REQUIRE THAT THIS REPORT OR CERTIFICATION BE SUBMITTED:

Semi-Annual NSPS Report

d) WERE THE ABOVE REFERENCED ITEMS IN 8(a) IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS FOR THE ENTIRE REPORTING PERIOD? [X] YES [ ] NO

IF YES, THEN THE "REPORT INFORMATION" SECTION ON PAGE 3 OF THIS FORM DOES NOT NEED TO BE COMPLETED.

IF NO, THEN COMPLETE AND SUBMIT FORM CAAPP-405 - "EXCESS EMISSIONS, MONITORING EQUIPMENT DOWNTIME, AND MISCELLANEOUS REPORTING FORM."

WM01426

REPORT INFORMATION

9) TITLE OF REPORT BEING SUBMITTED:

NSPS Semi-Annual Report

10) IDENTIFY THE APPLICABLE REQIREMENT(S) WHICH REQUIRES THIS REPORT (IF APPLICABLE):

40 CFR 60.757(f) NSPS

11) BRIEFLY EXPLAIN WHAT THIS REPORT COVERS:

This Semi-Annual NSPS Report is a summary of any exceedences of monitored parameters, periods of downtime for gas collection/control devices, and any expansions/modifications to the gas collection system.

12) ATTACH THE REPORT TO THIS FORM.

See Attached Report

SIGNATURE BLOCK

NOTE: THIS CERTIFICATION MUST BE SIGNED BY A RESPONSIBLE OFFICIAL. APPLICATIONS WITHOUT A SIGNED CERTIFICATION WILL BE RETURNED AS INCOMPLETE.

13) I CERTIFY UNDER PENALTY OF LAW THAT, BASED ON INFORMATION AND BELIEF FORMED AFTER REASONABLE INQUIRY, THE STATEMENTS AND INFORMATION CONTAINED IN THIS APPLICATION ARE TRUE, ACCURATE AND COMPLETE.

AUTHORIZED SIGNATURE:

BY: Ernest H Dennison
AUTHORIZED SIGNATURE

DISTRICT ENGINEER
TITLE OF SIGNATORY

ERNEST H DENNISON
TYPED OR PRINTED NAME OF SIGNATORY

2 / 4 / 13
DATE

APPLICATION PAGE _____

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL – PERMIT SECTION
P.O. BOX 19506
SPRINGFIELD, ILLINOIS 62794-9506

FOR APPLICANT'S USE
Revision #: _____
Date: ____ / ____ / ____
Page _____ of _____
Source Designation:

DELEGATION OF AUTHORITY FOR RESPONSIBLE OFFICIAL TO A REPRESENTATIVE

FOR AGENCY USE ONLY
ID NUMBER:
PERMIT #:
DATE:

THIS FORM SHALL BE USED BY A RESPONSIBLE OFFICIAL TO DELEGATE AUTHORITY TO A REPRESENTATIVE OF SUCH PERSON FOR SIGNATURE ON APPLICATIONS OR CERTIFICATION OF REPORTS TO BE SUBMITTED PURSUANT TO THE CLEAN AIR ACT.

THIS FORM SHALL ONLY BE USED FOR A CORPORATION AT WHICH A PRESIDENT, SECRETARY, TREASURER, OR VICE-PRESIDENT OF THE CORPORATION IN CHARGE OF BUSINESS FUNCTION, OR ANY OTHER PERSON WHO PERFORMS SIMILAR POLICY OR DECISION MAKING FUNCTIONS FOR THE CORPORATION TO TRANSFER THE AUTHORITY AS A RESPONSIBLE OFFICIAL TO A REPRESENTATIVE OF SUCH PERSON. THE REPRESENTATIVE OF SUCH PERSON MUST BE RESPONSIBLE FOR THE OVERALL OPERATION OF ONE OR MORE MANUFACTURING, PRODUCTION, OR OPERATING FACILITIES APPLYING FOR OR SUBJECT TO A PERMIT.

NOTE: THIS TRANSFER OF DELEGATION OF AUTHORITY IS APPLICABLE ONLY IF THE FACILITY EMPLOYS MORE THAN 250 PERSONS OR HAS A GROSS ANNUAL SALES OR EXPENDITURES EXCEEDING $25 MILLION (IN SECOND QUARTER 1980 DOLLARS).

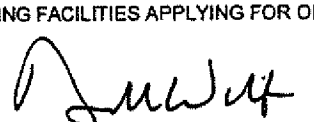
SOURCE INFORMATION

1) SOURCE NAME: Cottonwood Hills Recycling and Disposal Facility

2) DATE FORM PREPARED: 1/17/12	3) SOURCE ID NO. (IF KNOWN): 163075AAL

TRANSFER OF AUTHORITY

4) I, THE UNDERSIGNED, BEING A PRESIDENT, SECRETARY, TREASURER, OR VICE-PRESIDENT OF THE CORPORATION IN CHARGE OF BUSINESS FUNCTION, OR OTHER PERSON WHO PERFORMS SIMILAR POLICY OR DECISION MAKING FUNCTIONS FOR THE CORPORATION, HEREBY TRANSFER THE AUTHORITY AS A RESPONSIBLE OFFICIAL TO Ernest H. Dennison, THEY BEING A REPRESENTATIVE AND RESPONSIBLE FOR THE OVERALL OPERATION OF ONE OR MORE MANUFACTURING, PRODUCTION, OR OPERATING FACILITIES APPLYING FOR OR SUBJECT TO A PERMIT.



AUTHORIZED SIGNATURE

Vice President and Assistant Secretary
TITLE OF SIGNATORY

Dennis M. Wilt
TYPED OR PRINTED NAME OF SIGNATORY

1 / 17 / 12
DATE

Ernest H. Dennison
DELEGATED REPRESENTATIVE

District Engineer
TITLE OF DESIGNATED REPRESENTATIVE

THIS AGENCY IS AUTHORIZED TO REQUIRE THIS INFORMATION UNDER ILLINOIS REVISED STATUTES, 1991, AS AMENDED 1992, CHAPTER 111 1/2, PAR. 1039 5 DISCLOSURE OF THIS INFORMATION IS REQUIRED UNDER THAT SECTION. FAILURE TO DO SO MAY PREVENT THIS FORM FROM BEING PROCESSED AND COULD RESULT IN THE APPLICATION BEING DENIED. THIS FORM HAS BEEN APPROVED BY THE FORMS MANAGEMENT CENTER.

FOR APPLICANT'S USE

APPLICATION PAGE _____

WM01428

COTTONWOOD HILLS
RECYCLING AND DISPOSAL FACILITY

NSPS SEMI-ANNUAL REPORT

For the Reporting Period
07/01/12 to 12/31/12

Prepared By
Waste Management of Illinois, Inc.

February 2013

1.0 Introduction

This document consists of the semi-annual report for Cottonwood Hills Recycling and Disposal Facility in Marissa, Illinois and has been prepared in accordance with 40 CFR 60.757(f). This report covers the period of gas system operations from July 1, 2012 to December 31, 2012.

Documented in this report are exceedances of monitored parameters under 40 CFR 60.756, periods of downtime for gas collection/control devices, and any expansions/modifications to the gas collection system during the reporting period. The report is organized into three main sections: Collection systems, Control Devices and Landfill.

The gas collection system currently in place at the site consists of 22 vertical gas collection wells and temporary gas collection trenches. The wells and trenches are connected to the gas collection laterals and header pipe which leads to a 3000 scfm open flare (control device).

The gas mover equipment is comprised of a blower at the flare station.

2.0 Collection System Summary

2.1 Exceedance of Monitored Parameters

Gauge Pressure at each Gas Collection Wellhead (40 CFR 60.756 (a)(1))

- Report all instances of positive pressure measured at the gas collection header of each individual wellhead, including value and length of time measured.
- Per 40 CFR 60.753 (b), record instances when positive pressure occurred at a wellhead in an effort to avoid a landfill fire.

Based on a review of the data, any positive pressure exceedances which were detected had a corrective action (adjusted wellhead vacuum) initiated within 5 days and was fixed within 15 days, or have a variance request (approved or pending), or were replaced by a new replacement gas well. Therefore, these wells are considered to be in compliance (See Exceedence Report in Attachment 1).

Monthly Oxygen or Nitrogen Concentration at Each Gas Collection Wellhead (40 CFR 60.756(a)(2))

- Report all instances, on a per well basis, when nitrogen concentrations exceeded 20% or oxygen concentrations exceed 5%. Report date, value and length of time of each exceedance.

- Detail action taken within 5 days to correct exceedance. Report date that exceedance was corrected (must be less than 15 days).

Based on a review of the data, any oxygen reading in excess of the regulatory limits of 5% had a corrective action (adjusted wellhead vacuum) initiated within 5 days and was fixed within 15 days, or have a variance request (approved or pending), or were replaced by a new replacement gas well. Therefore, these wells are considered to be in compliance (See Exceedence Report in Attachment 1).

Temperature of the landfill gas at each wellhead (40 CFR 60.756(a)(3))

- Report all instances, on a per well basis, when landfill gas temperature exceeded 55°C (131°F).
- Detail action taken within 5 days to convert exceedance. Report date that exceedance was corrected (must be less than 15 days).

There were multiple instances of a temperature exceeding 131°F as measured at the wellhead during the reporting period (See Exceedence Report in Attachment 1). These wells have received USEPA approved temperature variances or have pending variance requests or were replaced with a new gas collection well (See Attachment 2 for variance submitted during this reporting period). Therefore, these wells are considered to be in compliance.

2.2 Record of Operation

Description and duration of all periods when the gas stream from the collection system was diverted from the control device through a bypass line (40 CFR 60.756(b)(2)) for enclosed flare, engines or turbines, or 40 CFR 60.756(c) for utility flares).

The gas collection system at Cottonwood Hills RDF does not have a bypass line. Therefore, there were no periods of time that flow was diverted through a bypass line. All flow was directed to the permitted control device (open flare).

Description and duration of all periods when the collection system was not operating for more than 5 days.

There was no period of time during which the collection system was not operating for more than 5 days during the reporting period.

2.3 Record of Expansion

Date and location of all newly installed wells or collection system expansion (40 CFR 60.757(f)(6)).

Two new gas collection wells (MW11 and MW81) and five replacement wells (MW09R, MW10R, MW14R, MW20R and MW80R) were installed during the reporting period (See Attachment 3).

3.0 Control Device Summary

3.1 Monitored Parameters

Flare Flame (Utility Flare)

- Report all periods of flare flame absence (40 CFR 60.758(c)(4)).

The open flare at Cottonwood Hills RDF is equipped with a thermocouple to continuously determine that a flame is present via temperature. Upon loss of flame (drop in temperature), the thermocouple automatically shuts down the blower.

In addition, the blower inlet control valve is automatically closed to prevent uncontrolled discharge. The lack of a flame at the flare is not indicative of an emissions exceedance, since the system will not operate when a flame is not present.

Flow (Utility Flare)

- Report all periods during which the control device was not operating for more than one hour; report duration of each event (40 CFR 60.757(f)(3)).

A Table of periods when the control device (open flare) was not operating for more than one hour is provided in Attachment 4. No raw landfill gas was emitted through the control device during the downtime. Therefore, the control device did not allow emissions of raw landfill gas for more than one hour.

3.2 Performance Testing

Performance Test (Utility Flare)

- Complete initial/annual performance test on the open flare in accordance with IEPA-BOA Construction Permit application number 06100058.

The performance test for 2012 was submitted on December 12, 2012.

4.0 Landfill Summary

4.1 Monitored Parameters

Surface Scan

- Report the location of each exceedance of the 500 ppm methane concentration, and the concentration recorded at each exceedance location (40 CFR 60.757(f)(5)).

The quarterly methane surface scans were conducted at the facility as required. A Table of exceedances is provided in Attachment 5. Any exceedances were corrected and re-monitored within the required timeframes.

Semi-Annual Sampling/Analysis

- Perform semi-annual sampling and analysis of landfill gas entering the control system in accordance with IEPA-BOA application number 06100058.

Sampling and analysis of the landfill gas is conducted in conjunction with the performance test for the flare.

ATTACHMENT 1

COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
WELLHEAD PERFORMANCE COMPLIANCE AND CORRECTIVE ACTION
FOR JULY 1, 2012 to DECEMBER 31, 2012 REPORTING PERIOD

Well	Date	Temp	Pw	CH4%	CO2%	O2%	Date	Corrective Action	Temp	Pw	CH4%	CO2%	O2%	CO
MW08		**Variance request was sent to USEPA on 01/24/12 for permanent temperature variance of 135 F**												
MW08	07/19/12	136	-3.5	57.8	39.9	0.0	07/19/12	Wellhead Pw adjusted	136	-2.9				
MW08	08/10/12	137	-1.1	58.4	39.5	0.0	08/10/12	Wellhead Pw adjusted	138	-0.9				25
MW08		**Variance request was sent to USEPA on 09/06/12 for permanent temperature variance of 140 F**												
MW08	09/24/12	135	-0.1	56.9	39.9	0.0	09/24/12	Wellhead Pw adjusted	135	0.0				25
MW08	10/08/12	137	-0.2	59.9	39.1	0.0	10/08/12	Wellhead Pw adjusted	137	-0.6				
MW08	11/01/12	133	-1.9	59.0	40.8	0.1	11/01/12	Wellhead Pw adjusted	133	-1.9				
MW08	12/11/12	135	-1.7	58.7	41.2	0.0	12/11/12	Wellhead Pw adjusted	134	-1.6				
MW09	07/19/12	111	-0.3	18.2	28.9	6.9	07/19/12	Wellhead Pw adjusted		-0.2			> 5	
MW09	08/10/12	113	-0.1	23.1	30.5	6.2	08/10/12	Wellhead Pw adjusted		0.0			> 5	
		Gas Collection Well MW09 replaced by MW09R on 08/22/12												
MW09R	09/20/12	129	-3.0	55.4	43.6	0.1								
MW09R	10/08/12	129	-3.4	31.3	30.2	2.4								
MW09R	11/01/12	125	-1.3	43.4	39.5	0.7								
MW09R	12/11/12	124	-0.7	37.6	34.6	2.2								
MW10		**Variance request was sent to USEPA on 01/24/12 for permanent temperature variance of 155 F**												
MW10	07/19/12	138	-2.9	48.1	44.8	0.1	07/19/12	Wellhead Pw adjusted	138	-2.4				
MW10	08/10/12	143	-1.4	45.7	45.5	0.1	08/10/12	Wellhead Pw adjusted	143	-1.4				25
		Gas Collection Well MW10 replaced by MW10R on 08/21/12												
MW10R		**Variance request was sent to USEPA on 09/06/12 for permanent temperature variance of 145 F**												
MW10R	09/20/12	143	-1.3	54.5	42.3	0.0	09/20/12	Wellhead Pw adjusted	143	-1.3				20
MW10R	10/03/12	134	-2.1	40.2	42.8	0.1	10/03/12	Wellhead Pw adjusted	135	-1.2				
MW10R	11/01/12	132	-0.6	49.3	46.6	0.0	11/01/12	Wellhead Pw adjusted	132	-0.6				
MW10R	12/11/12	134	-0.3	53.6	45.6	0.1	12/11/12	Wellhead Pw adjusted	133	-0.3				
MW17	07/19/12	135	-4.5	45.9	40.4	0.0	07/19/12	Wellhead Pw adjusted	136	-4.1				
MW17	08/10/12	137	-4.3	46.3	38.2	0.1	08/10/12	Wellhead Pw adjusted	136	-3.9				30
MW17		**Variance request was sent to USEPA on 09/12/12 for permanent temperature variance of 140 F**												
MW17	09/24/12	136	-3.8	48.4	41.1	0.0	09/24/12	Wellhead Pw adjusted	136	-3.4				20
MW17	10/03/12	138	-2.9	50.0	40.4	0.0	10/03/12	Wellhead Pw adjusted	138	-1.8				
MW17	11/01/12	136	-1.3	54.5	44.5	0.0	11/01/12	Wellhead Pw adjusted	136	-1.3				
MW17	12/11/12	139	-1.3	55.3	43.0	0.1	12/11/12	Wellhead Pw adjusted	139	-1.3				
MW19	07/19/12	141	-4.8	44.5	35.8	0.0	07/19/12	Wellhead Pw adjusted	139	-3.8				
MW19	08/10/12	140	-2.3	51.5	39.7	0.0	08/10/12	Wellhead Pw adjusted	138	-1.8				
MW19		**Variance request was sent to USEPA on 09/06/12 for permanent temperature variance of 145 F**												
MW19	09/24/12	135	-0.2	51.5	39.8	0.1	09/24/12	Wellhead Pw adjusted	135	-0.2				
MW19	10/08/12	136	-0.2	54.3	38.7	0.0	10/08/12	Wellhead Pw adjusted	136	-0.2				
MW19	11/01/12	133	-0.2	54.5	39.7	0.0	11/01/12	Wellhead Pw adjusted	133	-0.2				
MW19	12/11/12	138	-1.6	59.4	38.6	0.3	12/11/12	Wellhead Pw adjusted	137	-1.5				

Action shall be initiated to correct the exceedence within 5 calendar days. If correction of the exceedence can not be achieved within 15 calendar days of the first measurement, the gas system shall be expanded if temperature exceeds 55 Celcius, wellhead pressure Pw is positive, Nitrogen is 20% or above, or Oxygen is 5% or above.

ATTACHMENT 2

COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
GAS WELL USEPA VARIANCE APPROVALS

Gas Well	Approved Temp	USEPA Approval	Comments
MW07R	Temporary	06/24/10	Request 6 month approval of 145 F and O2 variance on 06/08/10 Approve 120 days from 06/02/10 to be below 131 F and O2 below 5%
			Requested permanent approval of 140 F and O2 of 10% on 08/06/10 Well Decommissioned
MW07R1	145 F Temporary	04/07/11	Requested permanent approval of 145 F on 02/25/11 Requested permanent approval of 145 F on 04/04/11 USEPA approved a temporary variance for 8 months on 04/07/11 Requested permanent approval of 140 F on 12/07/11 Requested permanent approval of 145 F on 09/06/12
MW08			Requested permanent approval of 135 F on 01/24/12 Requested permanent approval of 140 F on 09/06/12
MW09	149 F Temporary	04/10	Requested permanent approval of 150 F on 03/23/10 Temporary approval for 6 months
	Pressure/Temp	05/17/10	Notify high CO*, request well shutoff & pressure variance on 04/23/10 Approved temporary variances for 120 days from 04/12/10
	150 F	**04/07/11**	Requested permanent approval of 150 F on 08/06/10 Requested permanent approval of 154 F on 02/25/11 Requested permanent approval of 149 F on 04/04/11 **Approved 150 F**
			Requested permanent approval of 155 F on 05/20/11 Requested permanent approval of 160 F on 01/24/12
MW09R			Requested permanent approval of 150 F on 09/06/12
MW10	Pressure/Temp	06/10/10	Requested approval of 140 F and positive pressure on 05/27/10 Approved temporary variances for 120 days from 05/14/10
	145 F	**04/07/11**	Requested permanent approval of 140 F on 08/06/10 Requested permanent approval of 147 F on 04/04/11 **Approved 145 F**
			Requested permanent approval of 150 F on 05/20/11 Requested permanent approval of 155 F on 01/24/12
MW10R			Requested permanent approval of 145 F on 09/06/12
MW17		09/12/12	Requested permanent approval of 140 F on 09/12/12
MW19			Requested permanent approval of 140 F on 05/20/11
			Requested permanent approval of 145 F on 09/06/12

* High CO was found to be from interferrence with tube reading ... Lab testing verified low CO

WASTE MANAGEMENT

WASTE MANAGEMENT OF ILLINOIS, INC.
601 Madison Road
East St. Louis, Illinois 62201
(618) 271-6788
(618) 271-1227 Fax

September 6, 2012

Ms. Linda Rosen
USEPA (AE-17J) – Air & Radiation Division
Air Enforcement and Compliance Assurance Branch
77 West Jackson Boulevard
Chicago, Illinois 60604

Cottonwood Hills Recycling and Disposal Facility - Site I.D. No. 163075AAL
Request for Higher Operating Temperatures in Landfill Gas Extraction Wells
MW07R1, MW08, MW09/MW09R, MW10/MW10R and MW19

Dear Ms. Rosen:

This letter provides updated gas well data for previous requests for higher operating temperatures dated May 20, 2011, December 7, 2011 and January 24, 2012. This request supersedes the previous requests which provided notification that the temperature in the above referenced landfill gas extraction wells exceeded either the 55°C (131°F) temperature limit or the previously requested approved temperature variances and requested temperature variances. The current temperature variance requests are discussed for each well below:

MW07R1

Landfill gas extraction well MW07R1 was installed on November 10, 2010, connected to the header system in December 2010 and January 2011, and monitoring began January 7, 2011. The initial reading on January 7, 2011 was below the 131°F limit, however, with continued gas extraction, temperatures rose to 145°F in February 2011 (see attached table). A carbon monoxide (CO) reading was taken on well MW07R1 on February 15, 2011 and the Drager tube reading indicated CO was less than 100 ppm (subsequent readings have been 150 ppm or below). The well vacuum was reduced on the gas well as a corrective action within the 5 day regulatory time frame in order to try and reduce the operating temperature of the well. The reduction in vacuum has lowered the gas temperature in the well to below 131°F. However, in order to reduce the temperature, the well only collects less than 10 scfm of gas with reduced vacuum when a well of this depth should be collecting/removing more gas. Since there was no indication of subsurface oxidation (such as smoke, subsidence, or high CO), and the percent oxygen remained low even at higher vacuums and the higher temperatures are typical for gas wells in the area with substantial waste thickness (MW07R1 was drilled to 122 ft deep), **this letter requests a permanent**

higher operating temperature of 145°F or below in well MW07R1 so that sufficient volumes of gas can be collected from the well.

MW08

This letter requests a higher operating temperature of 140°F for gas collection well MW08. Well MW08 had a temperature of 134°F during the September 8, 2011 monitoring event (see attached data table). Corrective actions were implemented at the time of monitoring by adjusting wellhead vacuum which reduced the temperature to 133°F. Additional adjustments to the wellhead vacuum were made along with the cooler winter weather returned the operating temperature to 131°F. However, once spring and summer arrived with warmer ambient air temperatures the well temperatures rose to as high as 139°F while collecting gas. The well vacuums were reduced as a corrective action and the temperatures dropped back a few degrees but at the expense of a reduced gas collection flow. Since the CO readings were all below 100 ppm and there is no evidence of smoke or subsidence, **this letter requests a permanent higher operating temperature of 140°F or below in well MW08 so that a sufficient amount of gas can be collected.**

MW09 and MW09R

The USEPA approved a higher operating temperature variance of 150°F or below for landfill gas extraction well MW09 on April 7, 2011. The February 15, 2011 monitoring of well MW09 had an initial temperature reading of 154°F. Corrective action was initiated immediately be reducing the vacuum at the time of monitoring. A carbon monoxide (CO) reading was taken on well MW09 on February 15, 2011 and the Drager tube reading indicated CO was less than 100 ppm. A permanent higher operating temperature of 154°F was originally requested on February 25, 2011 but was subsequently lowered due to lower gas temperatures in the well. Gas temperatures in the well have rose again to the near the previous levels (152°F on May 13, 2011) while CO has remained low (CO < 100 ppm). Since there was no indication of subsurface oxidation and these temperatures are typical for gas wells in the area with substantial waste thickness (MW09 was drilled to 112 ft deep), a variance request was submitted to the USEPA on May 20, 2011 requesting a higher permanent higher operating temperature of 155°F or below in well MW09. Additional data has since been collected for the well (see attached data table). MW09 has continued to have low CO readings (less than 100 ppm) and no evidence of smoke or fire, so a new permanent temperature variance request was sent to the USEPA on January 24, 2012 that requested a permanent higher operating temperature of 160°F or below. The well subsequently broke off either due to landfill settlement and/or from refuse filling around the well as the methane decreased and oxygen increased. A corrective action of reduced vacuum was initiated with 5 days to reduce oxygen levels and the new well (MW09R) and was scheduled for redrilling and connection to the header system at approximately 120 days (see attached well log for MW09R). Since the replaced MW09 had a USEPA approved temperature variance of 150°F (approval dated April 7, 2011), **this letter requests a permanent higher operating temperature of 150°F or below in well MW10R in order to have operational flexibility to collect a sufficient volume of gas.**

MW10 and MW10R

The USEPA approved a higher operating temperature variance of 145°F or below for landfill gas extraction well MW10 on April 7, 2011. Corrective actions of adjusting well vacuum showed that a higher operating temperature in well MW10 is needed in order to allow for an increase in vacuum to collect a sufficient amount of gas from the well. Since there has been no indication of subsurface oxidation and these temperatures are typical for gas wells in the area with substantial waste thickness and operationally flexibility is needed (ability to pull gas from the well with a higher vacuum), a variance request for an increased operating temperature was sent to the USEPA on May 20, 2011 that requested a permanent higher operating temperature of 150°F or below in well MW10. Additional data has since been collected (see attached data table). MW10 has continued to have low CO readings (125 ppm or less) and no evidence of smoke or fire. Therefore, a variance request was sent to the USEPA on January 24, 2012 for a permanent higher operating temperature of 155°F or below in well MW10. Vacuums were subsequently reduced to lower temperatures but at the expense of collecting sufficient gas from the well. The well (MW10) was replaced by MW10R (see attached well log) on August 21, 2012 as it appears to have been damaged or broken off due to landfill settlement as flows decreased to 5 scfm or below. Since the replaced MW10 had a USEPA approved temperature variance of 145°F (approval dated April 7, 2011), **this letter requests a permanent higher operating temperature of 145°F or below in well MW10R in order to have operational flexibility to collect a sufficient volume of gas.**

MW19

Landfill gas extraction well MW19 was installed on November 12, 2010. The refuse temperature at the time of drilling was 134°F. The header pipe was constructed and the gas well subsequently connected to the header in March/April 2011. The first monthly reading was taken on April 5, 2011. The temperature reading on May 13, 2011 was 135°F. Corrective action was initiated immediately be reducing the vacuum at the time of monitoring which reduced the temperature to 134°F. CO readings were taken and all were less than 100 ppm. Since there has been no indication of subsurface oxidation and these temperatures are typical for gas wells at the facility with substantial waste thickness (MW19 was drilled to 97 ft deep), and operationally flexibility is needed (ability to pull gas from the well with a higher vacuum), a variance request for a permanent higher operating temperature of 140°F or below in well MW19 was sent to the USEPA on May 20, 2011. Since the time of the variance request, the vacuum has been adjusted in order to try to lower temperature while at the same time collecting sufficient volumes of gas the temperatures have been as high as 141°F. In order to have operational flexibility to collect a sufficient volume of gas from the well, **this letter requests a permanent higher operating temperature of 145°F or below in well MW19.**

SUMMARY

We do not believe any of the elevated well temperatures are due to subsurface oxidation since there are no indications of fire, nor smoke, nor subsidence around the wells, nor elevated CO readings. There is also no reason to believe there are any structural problems related to the operation of the wells since oxygen levels in the wells (or replacement wells)

are typically less than 1%. In order to properly operate the wells with a vacuum and to collect sufficient volumes of gas from the wells higher operating temperatures are needed.

If you require additional information, please call me at (618) 271-6788 Ext 2122 or 314-568-2025.

Sincerely,
Waste Management of Illinois, Inc.

Ernest H Dennison, PE.
District Engineer

Cc: IEPA-BOA-Compliance and Enforcement Section
1021 North Grand Avenue East
Springfield, Illinois 62702

COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
LANDFILL GAS EXTRACTION WELL MW07R1

Device ID	Date Time	CH4 %	CO2 %	O2 %	Initial Static Pressure ("H2O)	Initial Temperature (Deg F)	Adjusted Temperature (Deg F)	Adjusted Static Pressure ("H2O)	Initial Flow SCFM	Adjusted Flow SCFM	CO ppm
MW07R1	01/07/2011 12:42	55.1	39.8	0	-1.2	129	130	-1.7	11	16	
MW07R1	02/15/2011 14:13	50.5	37.6	0.2	-3	145	139	-0.7	16	9	< 100
MW07R1	02/23/2011 11:33	46.2	36.7	0	-1.1	132	133	-1.1	4	5	
MW07R1	03/04/2011 11:35	54.1	38.7	0.4	-0.8	126	126	-0.8	4	6	
MW07R1	04/05/2011 10:17	44.8	34.2	0.4	-4.1	126	122	-3.8	6	5	
MW07R1	04/07/2011 09:50					145	145				
MW07R1	04/14/2011 01:44	50.6	36.3	0	-0.9	125	126	-1.1		8	150
MW07R1	05/13/2011 12:46	50.8	36.5	0.2	-2	137	137	-2.1	5	5	
MW07R1	06/16/2011 02:09	51.4	37.8	0.5	-0.8	114	116	-1	3	4	
MW07R1	07/20/2011 09:18	54.3	37.2	0.3	-1.3	126	131	-0.9	3	6	
MW07R1	08/03/2011 10:58	55.4	36.8	0.1	-0.2	113	118	-0.7	9	9	
MW07R1	09/08/2011 02:12	49.1	37.4	0.1	-2.3	140	138	-2	5	5	50
MW07R1	10/07/2011 10:36	54.2	37.6	0	-0.5	132	132	-0.5	2	3	25
MW07R1	11/03/2011 09:50	52.7	39.6	0.1	-0.8	120	132	-1	10	10	
MW07R1	12/08/2011 14:04	54.7	40.0	0.0	-2.8	139	138	-2.9	7	6	0
MW07R1	01/27/2012 12:21	45.5	35.1	1.2	-7.4	136	135	-7.4	11	12	
MW07R1	02/22/2012 12:15	45.1	35.6	0.9	-3.7	138	138	-3.2	8	5	
MW07R1	03/09/2012 08:26	46.7	34.6	0.5	-3.7	116	116	-3.8	3	4	
MW07R1	04/18/2012 09:18	51.4	38.3	0.0	-1.4	125	124	-1.4	16	17	
MW07R1	05/15/2012 11:53	50.9	37.7	0.0	-2.1	130	131	-2.1	2	2	
MW07R1	06/08/2012 09:43	50.6	35.5	0.0	-1.6	131	131	-1.6	5	3	
MW07R1	07/26/2012 11:52	50.6	33.8	1.7	-3.4	101	104	-3.5	11	11	
MW07R1	08/10/2012 12:52	53.6	39.6	0.0	-5.4	135	135	-5.5	2	3	

COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
LANDFILL GAS EXTRACTION WELL MW08

Well	Date	CH4 %	CO2 %	O2 %	Initial Static Pressure ("H2O)	Initial Temperature (Deg F)	Adjusted Temperature (Deg F)	Adjusted Static Pressure ("H2O)	Initial Flow SCFM	Adjusted Flow SCFM	CO ppm
MW08	09/08/11	57.6	39.7	0.0	-0.1	134	133	-0.4	25	27	75
MW08	10/07/11	57.1	39.5	0.0	-2.5	132	132	-3.9	33	61	20
MW08	11/03/11	46.4	38.5	0.1	-6.8	132	131	-6.5	64	62	
MW08	11/10/11	50.3	37.0	0.0	-5.8	130	130	-5.7	55	55	
MW08	12/08/11	59.4	39.8	0.0	-5.5	131	131	-8.1	55	93	0
MW08	01/26/2012 10:31	45.0	35.8	0.0	-14.2	132	130	-10.3	94	24	
MW08	02/23/2012 10:11	58.7	38.8	0.0	-1.0	132	130	-0.7	25	18	
MW08	03/09/2012 08:43	59.7	37.2	0.0	-2.2	127	127	-2.3	18	18	
MW08	04/18/2012 09:36	61.0	38.8	0.0	-0.6	138	139	-1.7	53	62	25
MW08	04/27/2012 11:32	55.2	41.1	0.0	-7.0	134	134	-4.2	75	30	
MW08	05/15/2012 12:12	59.4	39.4	0.0	-2.4	136	136	-2.3	32	30	
MW08	06/20/2012 14:33	58.5	41.4	0.0	-1.5	132	132	-1.8	25	33	
MW08	07/19/2012 07:44	57.8	39.9	0.0	-3.5	136	136	-2.9	36	26	
MW08	08/10/2012 13:16	58.4	39.5	0.0	-1.1	137	138	-0.9	22	20	25

COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
LANDFILL GAS EXTRACTION WELL MW09

Well	Date	CH4 %	CO2 %	O2 %	Initial Static Pressure ("H2O)	Initial Temperature (Deg F)	Adjusted Temperature (Deg F)	Adjusted Static Pressure ("H2O)	Initial Flow SCFM	Adjusted Flow SCFM	CO ppm
MW09	09/21/10	47.2	40.6	0.0	-2.0	140	142	-2.1	10	7	
MW09	10/13/10	51.3	40.8	0.0	-4.7	143	143	-4.7	15	15	<100
MW09	11/08/10	50.8	39.8	0.0	-4.5	140	138	-4.5	39	38	
MW09	12/06/10	50.8	39.5	0.2	-4.5	142	141	-4.4	8	5	
MW09	01/07/11	51.9	38.9	0.0	-4.9	139	138	-7.0	18	38	
MW09	02/15/11	50.7	40.2	0.0	-9.4	154	149	-2.5	51	10	<100
MW09	02/23/11	48.9	40.4	0.0	-0.9	147	147	-0.9	11	4	
MW09	03/04/11	47.5	39.2	0.2	-1.1	140	141	-1.1	5	4	
MW09	04/05/11	49.4	40.2	0.0	-3.6	140	139	-3.5	8	8	
MW09	04/07/11	**USEPA approved permanent temperature variance of 150 F on 04/07/11**									
MW09	04/14/11	50.0	40.8	0.0	-2.3	144	144	-2.3	11	11	<100
MW09	05/13/11	49.4	40.7	0.2	-2.0	152	151	-2.0	9	10	25
MW09	05/20/11	**Variance request was sent to USEPA on 05/20/11 for permanent temperature variance of 155 F**									
MW09	07/20/11	44.4	41.0	0.3	-0.5	151	150	-0.5	4	3	75
MW09	08/03/11	45.3	40.3	0.2	-1.6	152	151	-1.4	7	4	
MW09	08/11/11	42.3	40.5	0.3	-0.6	149	149	-0.4	8	5	100
MW09	09/08/11	30.6	42.6	0.0	-2.3	149	149	-1.9	5	5	75
MW09	10/07/11	44.0	39.8	0.0	-2.0	152	147	-1.5	10	6	20
MW09	11/03/11	45.0	44.9	0.0	-2.2	148	145	-2.2	20	20	
MW09	12/08/11	47.3	40.6	0.0	-2.7	153	152	-2.4	8	7	0
MW09	12/15/11	45.9	41.9	0.1	-3.3	148	157	-17.5	15	103	0
MW09	12/15/11	43.1	40.9	0.5	-25.4	158	158	-25.4	76	76	
MW09	12/16/11	45.4	39.7	0.6	-26.3	158	155	-21.2	71	38	
MW09	01/12/2012 10:36	47.5	39.2	0.0	-7.9	144	144	-7.3	16	11	
MW09	01/27/2012 12:15	46.1	38.3	0.9	-5.8	152	148	-5.2	10	8	
MW09	02/22/2012 12:24	43.7	38.7	0.0	-0.3	148	147	-0.2	7	3	
MW09	03/12/2012 12:46	40.9	40.9	0.2	-2.4	117	119	-2.4	7	7	
MW09	04/18/2012 09:23	6.7	17.9	13.4	-0.6	88	89	-0.4	45	40	
MW09	04/27/2012 11:38	7.8	14.9	15.6	-0.1	85	85	-0.2	46	45	
MW09	05/15/2012 11:57	6.9	13.3	14.4	-0.7	93	93	-0.2	36	21	
MW09	06/20/2012 12:09	18.1	33.4	5.9	-0.1	100	100	-0.1	11	7	
MW09	07/19/2012 07:33	18.2	28.9	6.9	-0.3	111	111	-0.2			
MW09	08/10/2012 12:56	23.1	30.5	6.2	-0.1	113	112	0.0	13	13	

COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
LANDFILL GAS EXTRACTION WELL MW10

Well	Date	CH4 %	CO2 %	O2 %	Initial Static Pressure ("H2O)	Initial Temperature (Deg F)	Adjusted Temperature (Deg F)	Adjusted Static Pressure ("H2O)	Initial Flow SCFM	Adjusted Flow SCFM	CO ppm
MW10	08/05/10	56.9	41.6	0.0	-0.9	137	138	-1.0	8	11	
MW10	08/19/10	55.5	42.9	0.0	-2.0	142	140	-1.5	17	12	2000*
MW10	09/21/10	53.3	39.3	0.1	-0.3	138	139	-0.9	18	30	
MW10	10/13/10	57.6	42.1	0.0	-3.7	140	139	-6.0	27	51	< 100 **
MW10	11/08/10	55.0	40.3	0.0	-10.5	139	139	-11.5	56	64	
MW10	12/06/10	54.4	40.2	0.1	-14.6	140	140	-17.8	69	96	
MW10	01/07/11	50.6	39.1	0.0	-21.2	139	139	-21.7	88	90	
MW10	02/15/11	53.0	40.7	0.0	-22.0	147	142	-10.5	94	11	< 100 **
MW10	02/23/11	56.3	42.2	0.0	-0.3	142	143	-0.3	31	32	
MW10	03/04/11	54.5	42.2	0.2	-0.5	136	136	-0.5	3	3	
MW10	04/05/11	54.8	42.6	0.1	-3.3	136	136	-3.3	15	15	
MW10	04/07/11	USEPA approved permanent temperature variance of 145 F on 04/07/11									
MW10	04/14/11	51.0	41.5	0.0	-2.0	141	140	-3.0	14	15	< 100
MW10	05/13/11	49.4	41.1	0.4	-1.8	147	146	-1.8	15	15	25
MW10	05/20/11	Variance request was sent to USEPA on 05/20/11 for permanent temperature variance of 150 F									
MW10	07/20/11	50.7	43	0.2	-0.1	143	142	0.0	3	4	100
MW10	07/29/11	50.4	43.2	0.2	-0.2	144	146	-0.3	26	25	
MW10	08/03/11	51.8	41.5	0.3	-1.4	149	149	-1.4	10	13	
MW10	08/11/11	50.6	41.2	0.4	-1.0	149	147	-0.5	10	8	100
MW10	08/24/11	48.8	42.7	0.4	-0.5	147	149	-0.5	19	17	125
MW10	09/08/11	49.3	43.6	0.1	-0.8	149	149	-0.7	12	11	75
MW10	10/07/11	52.3	40.5	0.3	-1.1	147	145	-0.8	9	8	50
MW10	11/03/11	49.3	44.5	0.1	-0.9	142	142	-1.0	12	8	
MW10	12/08/11	52.2	43.3	0.0	-1.9	146	147	-2.0	13	14	0
MW10	12/15/11	50.6	43.3	0.2	-4.2	145	154	-21.7	20	140	
MW10	12/15/11	47.7	41.8	0.5	-27.0	155	154	-27.0	102	103	
MW10	12/16/11	46.7	39.6	0.8	-28.4	154	153	-24.7	90	69	0
MW10	01/26/2012 10:43	45.8	39	0	-13	153	147	-8.6	43	10	
MW10	02/22/2012 12:45	46.1	40.6	0	-1	148	148	-0.8	12	11	
MW10	03/09/2012 08:34	51.4	43.1	0.4	-4	138	128	-4.2	17	19	
MW10	04/12/2012 12:40	47.8	44.7	0.1	-3.2	148	148	-2.3	21	15	
MW10	05/15/2012 12:02	50.3	42.4	0	-4.4	149	149	-4.4	10	8	
MW10	06/20/2012 13:45	51.8	44.8	0	-4.2	146	146	-4.2	12	18	
MW10	07/19/2012 09:13	48.1	44.8	0.1	-2.9	138	138	-2.4	19	17	
MW10	08/10/2012 13:00	45.7	45.5	0.1	-1.4	143	143	-1.4	2	5	25

COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
LANDFILL GAS EXTRACTION WELL MW19

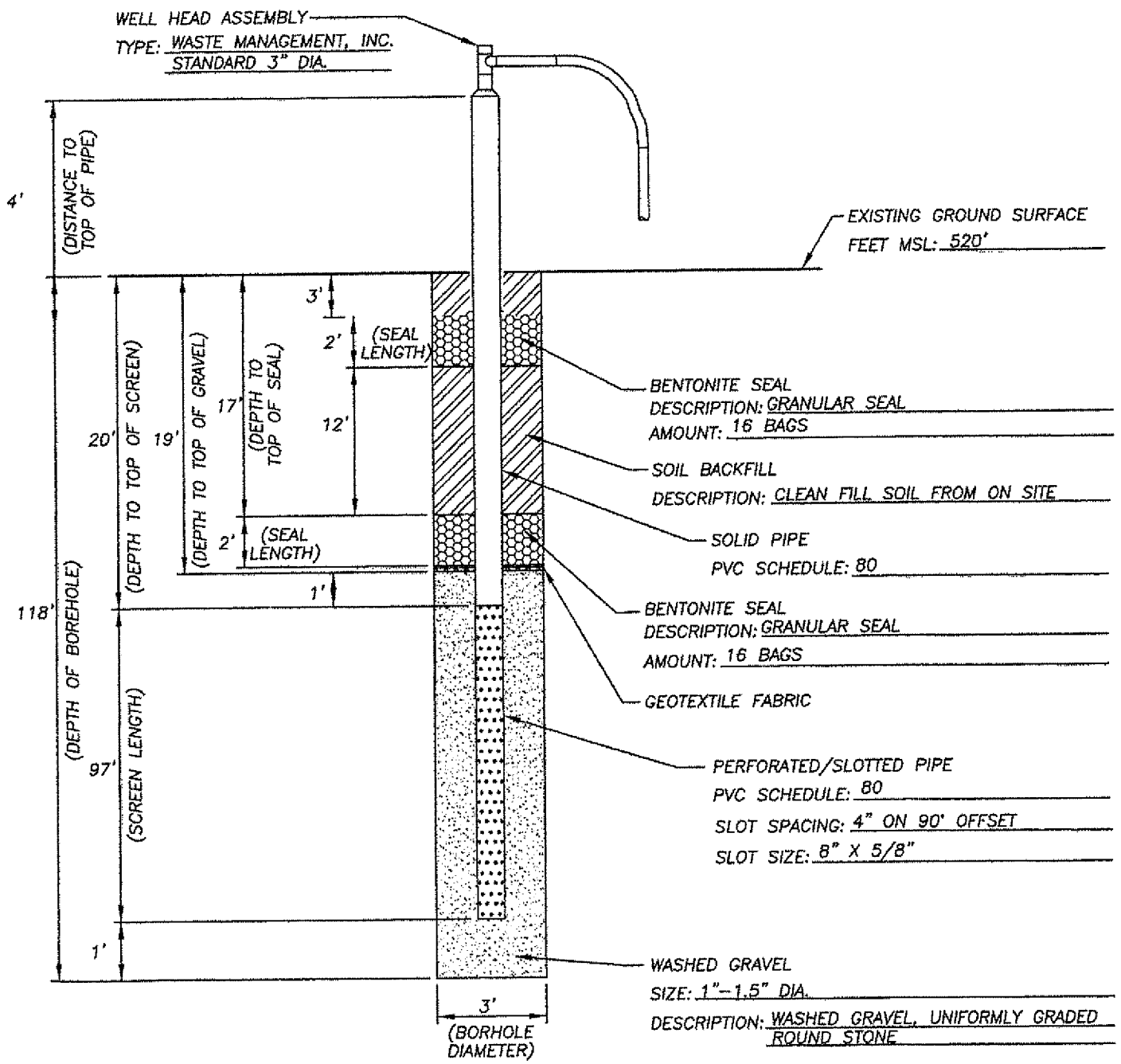
Device ID	Date Time	CH4 %	CO2 %	O2 %	Initial Static Pressure ("H2O)	Initial Temperature (Deg F)	Adjusted Temperature (Deg F)	Adjusted Static Pressure ("H2O)	Initial Flow SCFM	Adjusted Flow SCFM	CO ppm
MW19	04/05/2011 13:56	47.0	33.3	0.1	-6.4	130	129	-6.3	56	56	
MW19	04/14/2011 13:31	42.5	34.3	0	-6.2	130	128	-5.0	54	39	49
MW19	05/13/2011 13:00	52.2	36.7	0.4	-4.1	135	134	-3.5	39	34	25
MW19	05/20/2011 12:43	54.7	37.8	0.0	-1.8	134	132	-0.7	30	13	50
MW19	06/16/2011 14:54	52.6	38.8	0.6	-0.8	132	132	-0.8	12	13	30
MW19	07/20/2011 09:53	53.2	38.2	0.3	-0.8	135	135	-0.8	12	13	175
MW19	08/03/2011 13:55	54.9	38.5	0.0	-1.0	133	134	-1.1	15	15	
MW19	08/11/2011 15:03	55.2	37.0	0.5	-0.9	134	134	-0.8	15	13	75
MW19	09/08/2011 14:56	52.0	38.5	0.2	-0.2	133	133	-0.2	11	12	100
MW19	10/07/2011 11:23	54.0	39.2	0.1	-0.7	133	133	-0.8	13	13	50
MW19	11/03/2011 09:59	53.0	40.5	0.0	-0.6	131	130	-0.6	12	12	
MW19	12/08/2011 15:05	54.1	39.9	0.0	-0.9	131	131	-0.9	15	15	0
MW19	12/15/2011 12:00	52.6	39.0	0.1	-2.1	131	135	-11.6	16	121	
MW19	12/15/2011 14:11	50.5	39.1	0.2	-17.5	137	136	-17.5	102	102	
MW19	12/16/2011 15:56	43.2	35.3	0.3	-18.3	138	137	-13.9	99	49	0
MW19	01/27/2012 12:10	42.5	32.3	0.9	-8.1	137	135	-6.0	47	24	
MW19	02/22/2012 12:35	50.6	37.4	0.0	-2.4	137	136	-2.0	26	22	
MW19	03/09/2012 11:37	51.6	38.4	0.2	-2.4	135	134	-1.8	18	11	
MW19	04/18/2012 12:10	54.9	39.7	0.0	-0.2	136	137	-1.7	13	34	25
MW19	05/17/2012 10:54	49.7	36.5	0.1	-5.5	138	138	-5.0	40	33	
MW19	06/20/2012 15:05	45.8	37.1	0.0	-3.9	134	135	-3.9	26	27	
MW19	07/19/2012 08:42	44.5	35.8	0.0	-4.8	141	139	-3.8	30	17	
MW19	08/10/2012 14:00	51.5	39.7	0.0	-2.3	140	138	-1.8	14	8	40

AQUATERRA
ENVIRONMENTAL SOLUTIONS, INC.
6980 West 153rd Street
Overland Park, Kansas 66223

GAS WELL CONSTRUCTION DIAGRAM

PROJECT NUMBER: 5214.10
PROJECT NAME: 2012 COTTONWOOD HILLS GCCS CQA
GAS WELL NO.: MW09R
WELL LOCATION: 579643N 611455E
INSTALLATION START DATE: 8/22/12
COMPLETION DATE: 8/22/12
DRILLER: COLEMAN & SONS
INSPECTOR: JACLYN SMOLINSKI

COMMENTS: NOT TO SCALE



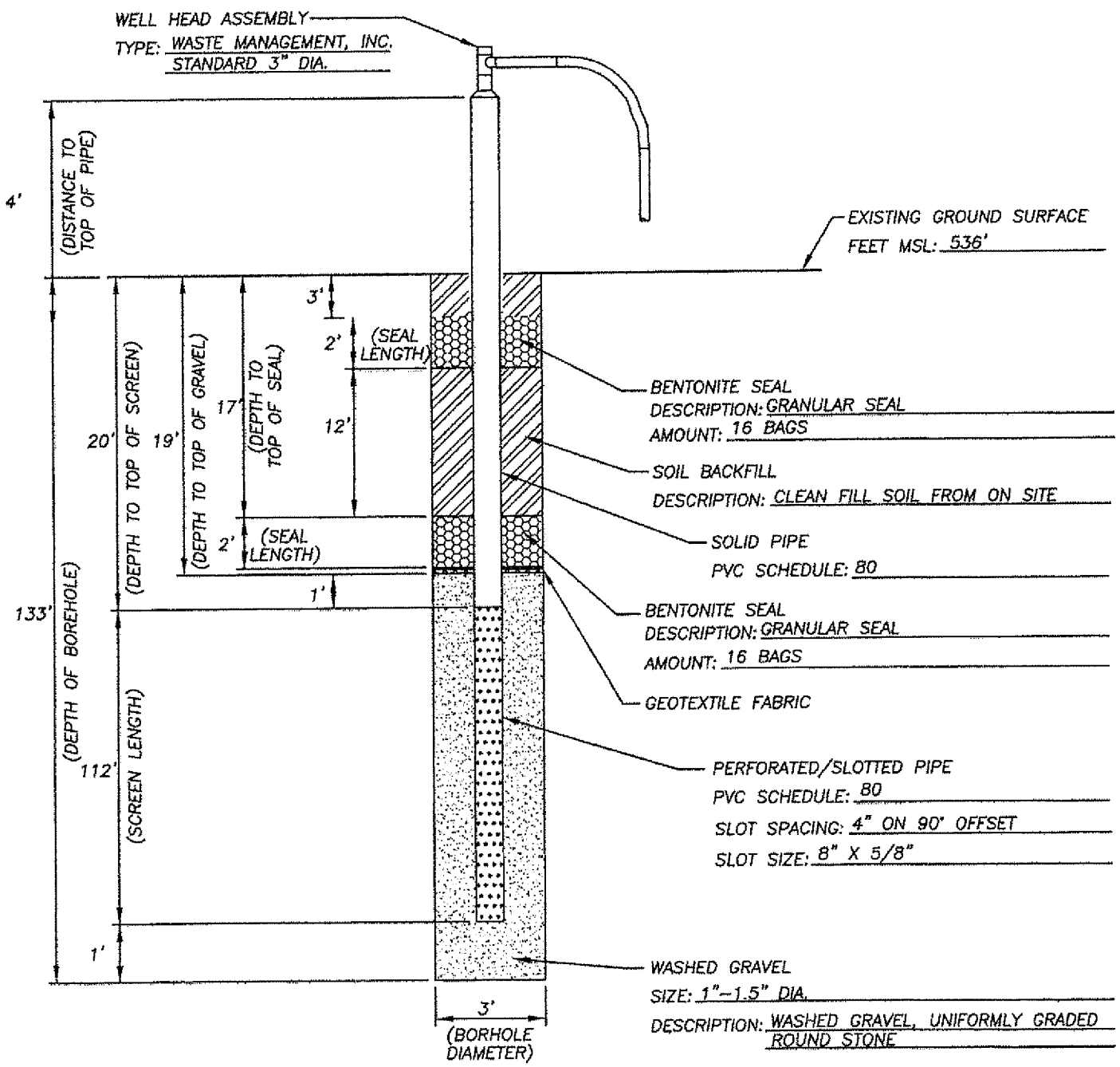
WM01447

AQUATERRA
ENVIRONMENTAL SOLUTIONS, INC.
6980 West 153rd Street
Overland Park, Kansas 66223

GAS WELL CONSTRUCTION DIAGRAM

PROJECT NUMBER: 5214.10
PROJECT NAME: 2012 COTTONWOOD HILLS GCCS CQA
GAS WELL NO.: MW10R
WELL LOCATION: 579488N 611249E
INSTALLATION START DATE: 8/20/12
COMPLETION DATE: 8/21/12
DRILLER: COLEMAN & SONS
INSPECTOR: JACLYN SMOLINSKI

COMMENTS: NOT TO SCALE



WM01448

WASTE MANAGEMENT OF ILLINOIS, INC.
601 Madison Road
East St. Louis, Illinois 62201
(618) 271-6788
(618) 271-1227 Fax

September 12, 2012

Ms. Linda Rosen
USEPA (AE-17J) – Air & Radiation Division
Air Enforcement and Compliance Assurance Branch
77 West Jackson Boulevard
Chicago, Illinois 60604

Cottonwood Hills Recycling and Disposal Facility - Site I.D. No. 163075AAL
Request for Higher Operating Temperatures in Landfill Gas Extraction Well MW17

Dear Ms. Rosen:

This letter is written to provide notification that the temperature in landfill gas extraction well MW17 exceeded either the 55°C (131°F) temperature limit. This well was inadvertently left out of the variance request summary for Cottonwood Hills wells submitted to the USEPA on September 6, 2012. The temperature variance request is discussed below:

MW17

MW17 was installed on December 2, 2011 and subsequently connected to the header/collection system in January/February 2012. The first reading on the well was taken on February 23, 2012 with a temperature of 127°F and good flow of 136 scfm. The July 19, 2012 temperature reading increased to 135/136°F. Corrective actions were implemented at the time of monitoring by adjusting wellhead vacuum (reduced from -10 to -6.3) but the temperature did not decline from the previous 135°F reading. Additional adjustments to the wellhead vacuum (reduced to -4 and then to -3) were made but has not change the temperature and has only decreased the volume of gas collected. CO readings were all less than 100 ppm and there is no smoke, subsidence or indications of fire. Therefore, **this letter requests a permanent higher operating temperature of 140°F or below in well MW17** so the sufficient vacuum can be applied to collect the landfill gas generated.

If you require additional information, please call me at (618) 271-6788 Ext 2122 or 314-568-2025.

Sincerely,
Waste Management of Illinois, Inc.

Ernest H Dennison, PE.
District Engineer

Cc: IEPA-BOA-Compliance and Enforcement Section
1021 North Grand Avenue East
Springfield, Illinois 62702

COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
LANDFILL GAS EXTRACTION WELL MW17

Device ID	Date Time	CH4 %	CO2 %	O2 %	Initial Static Pressure ("H2O)	Initial Temperature (Deg F)	Adjusted Temperature (Deg F)	Adjusted Static Pressure ("H2O)	Initial Flow SCFM	Adjusted Flow SCFM	CO ppm
MW17	02/23/2012 11:04	54.4	43.3	0	-5.5	127	127	-5.5	136	138	
MW17	03/09/2012 09:14	46.6	36.7	0.1	-6.8	127	127	-6.8	123	122	
MW17	04/18/2012 11:39	48.5	40.5	0	-7.9	130	129	-8	125	124	
MW17	05/15/2012 12:31	43.6	37.2	0	-9.3	130	130	-8	128	108	
MW17	06/20/2012 14:09	41.4	37.5	0	-10	129	129	-6.3	120	62	
MW17	07/19/2012 08:03	45.9	40.4	0	-4.5	135	136	-4.1	72	65	
MW17	07/24/2012 10:15	44.9	39	0	-4.1	135	135	-4.1	68	67	50
MW17	08/10/2012 13:31	46.3	38.2	0.1	-4.3	137	136	-3.9	65	59	30

ATTACHMENT 3

WASTE MANAGEMENT
OF ILLINOIS
601 Madison Road
E. St. Louis, IL 62201
(618) 271-6788
(618) 271-1227 Fax

September 11, 2012

Illinois Environmental Protection Agency
Bureau of Land – Planning and Reporting
1021 North Grand Avenue East
Springfield, Ill 62702

1630755017 – St. Clair County
Cottonwood Hills Recycling and Disposal Facility

Submittal of Gas Well Logs

Dear Sirs:

This letter transmits gas well installation logs for MW09R, MW10R, MW11, MW14R, MW20R, MW80R, and MW81 at the above referenced facility.

If you have any questions, please call me at (618) 271-6788 Ext 2122.

Sincerely,
Waste Management of Illinois, Inc.

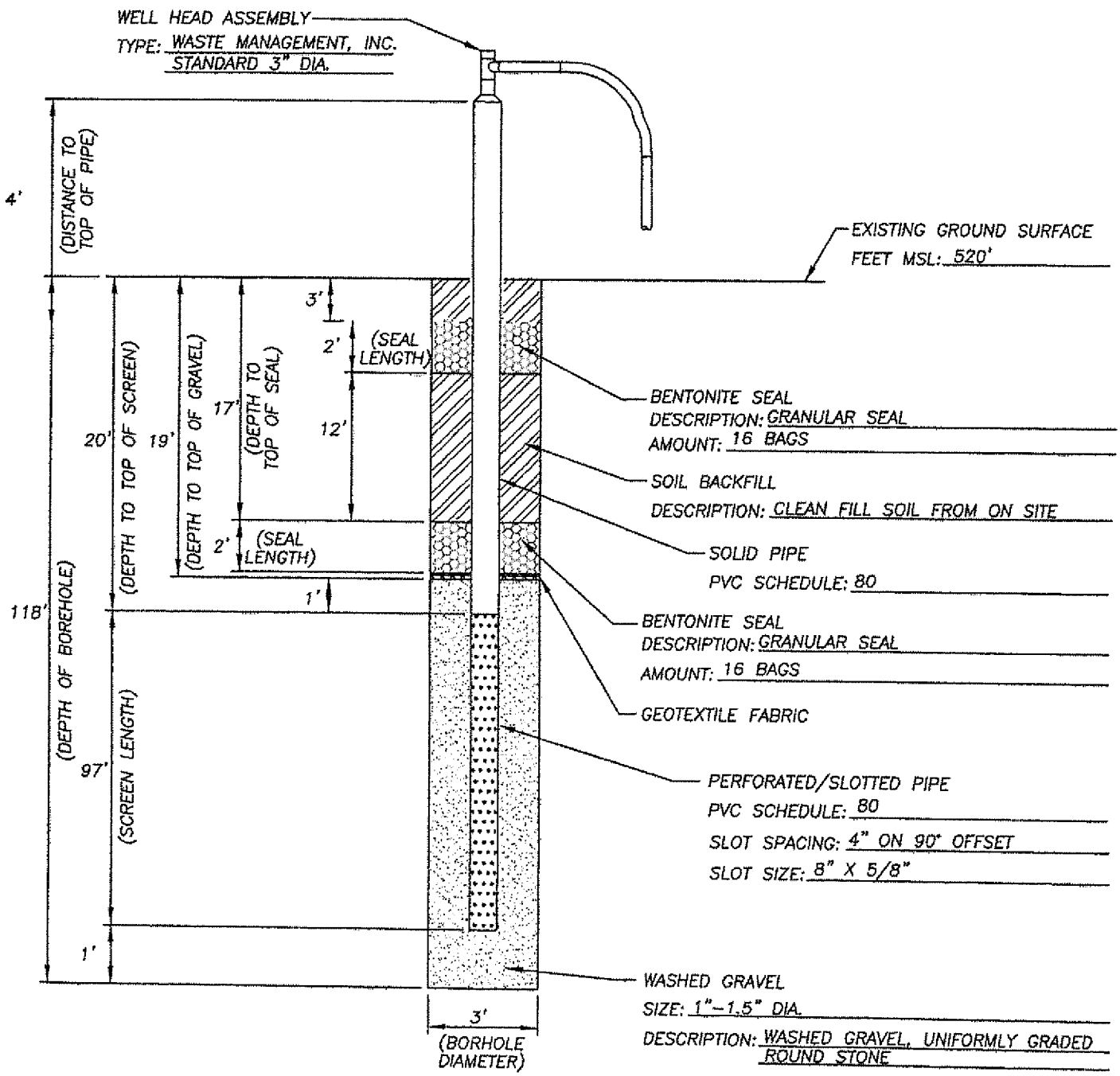
Ernest H Dennison, PE
District Engineer

AQUATERRA
ENVIRONMENTAL SOLUTIONS, INC.
6980 West 153rd Street
Overland Park, Kansas 66223

GAS WELL CONSTRUCTION DIAGRAM

PROJECT NUMBER: 5214.10
PROJECT NAME: 2012 COTTONWOOD HILLS GCCS CQA
GAS WELL NO.: MW09R
WELL LOCATION: 579643N 611455E
INSTALLATION START DATE: 8/22/12
COMPLETION DATE: 8/22/12
DRILLER: COLEMAN & SONS
INSPECTOR: JACLYN SMOLINSKI

COMMENTS: NOT TO SCALE



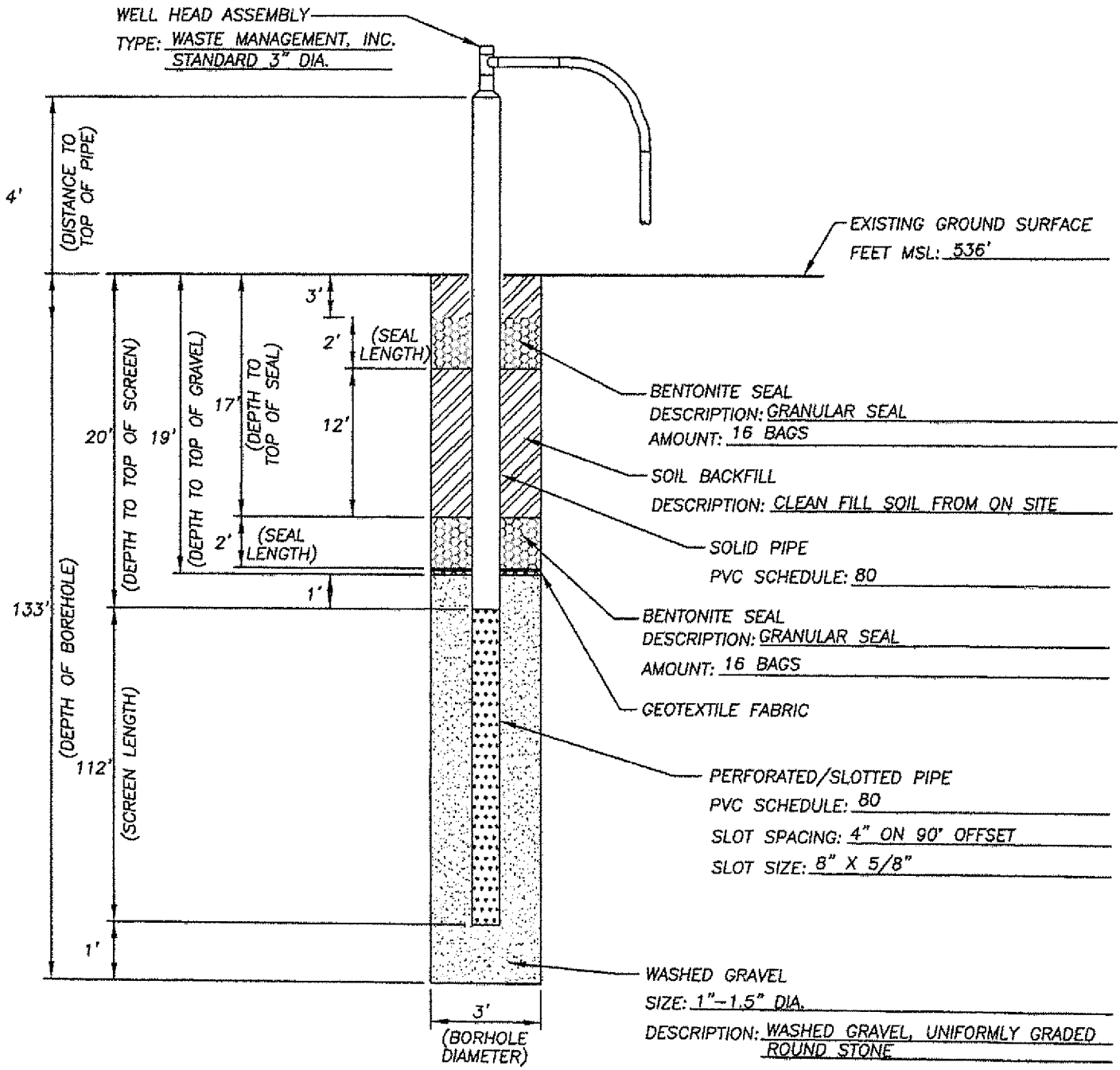
WM01454

AQUATERRA
ENVIRONMENTAL SOLUTIONS, INC.
6980 West 153rd Street
Overland Park, Kansas 66223

GAS WELL CONSTRUCTION DIAGRAM

PROJECT NUMBER: 5214.10
PROJECT NAME: 2012 COTTONWOOD HILLS GCCS CQA
GAS WELL NO.: MW10R
WELL LOCATION: 579488N 611249E
INSTALLATION START DATE: 8/20/12
COMPLETION DATE: 8/21/12
DRILLER: COLEMAN & SONS
INSPECTOR: JACLYN SMOLINSKI

COMMENTS: NOT TO SCALE



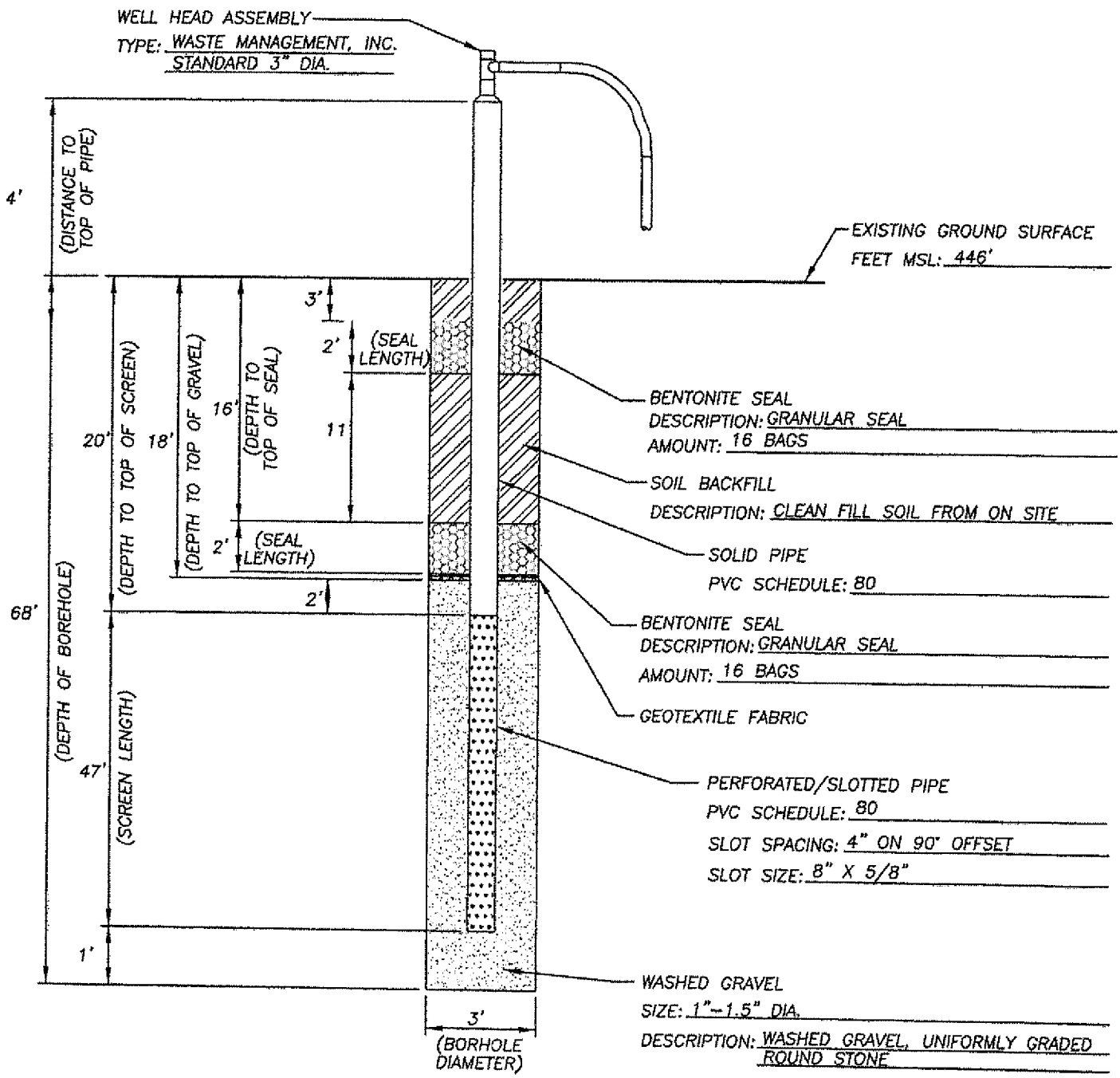
WM01455

AQUATERRA
ENVIRONMENTAL SOLUTIONS, INC.
6980 West 153rd Street
Overland Park, Kansas 66223

GAS WELL CONSTRUCTION DIAGRAM

PROJECT NUMBER: 5214.10
PROJECT NAME: 2012 COTTONWOOD HILLS GCCS CQA
GAS WELL NO.: MW11
WELL LOCATION: 578143N 610972E
INSTALLATION START DATE: 8/16/12
COMPLETION DATE: 8/16/12
DRILLER: COLEMAN & SONS
INSPECTOR: JACLYN SMOLINSKI

COMMENTS: NOT TO SCALE



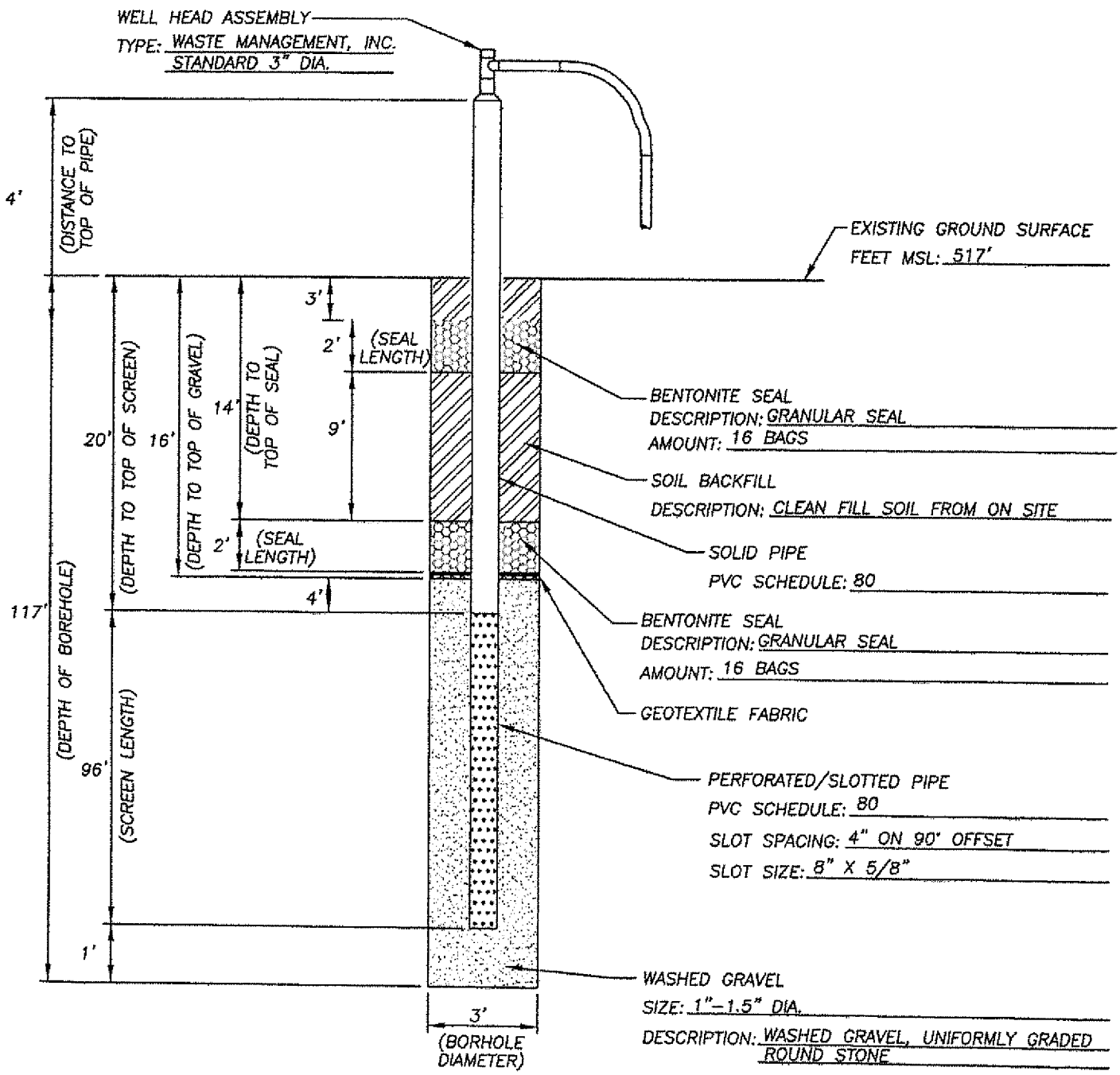
WM01456

AQUATERRA
ENVIRONMENTAL SOLUTIONS, INC.
6980 West 153rd Street
Overland Park, Kansas 66223

GAS WELL CONSTRUCTION DIAGRAM

PROJECT NUMBER: 5214.10
PROJECT NAME: 2012 COTTONWOOD HILLS GCCS CQA
GAS WELL NO.: MW14R
WELL LOCATION: 579020N 611264E
INSTALLATION START DATE: 8/16/12
COMPLETION DATE: 8/16/12
DRILLER: COLEMAN & SONS
INSPECTOR: JACLYN SMOLINSKI

COMMENTS: NOT TO SCALE



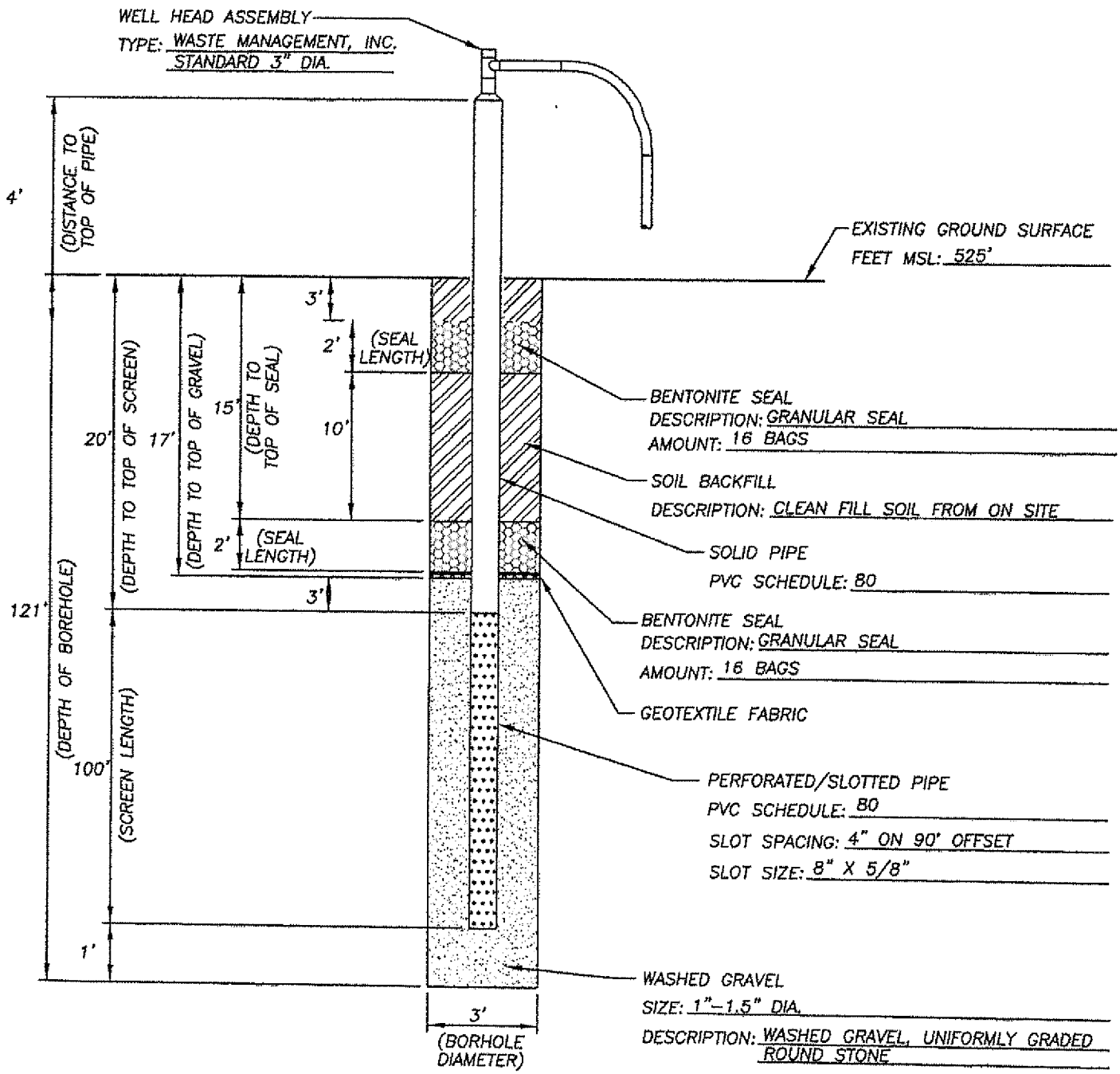
WM01457

AQUATERRA
ENVIRONMENTAL SOLUTIONS, INC.
6980 West 153rd Street
Overland Park, Kansas 66223

GAS WELL CONSTRUCTION DIAGRAM

PROJECT NUMBER: 5214.10
PROJECT NAME: 2012 COTTONWOOD HILLS GCCS CQA
GAS WELL NO.: MW20R
WELL LOCATION: 579227N 611303E
INSTALLATION START DATE: 8/20/12
COMPLETION DATE: 8/20/12
DRILLER: COLEMAN & SONS
INSPECTOR: JACLYN SMOLINSKI

COMMENTS: NOT TO SCALE



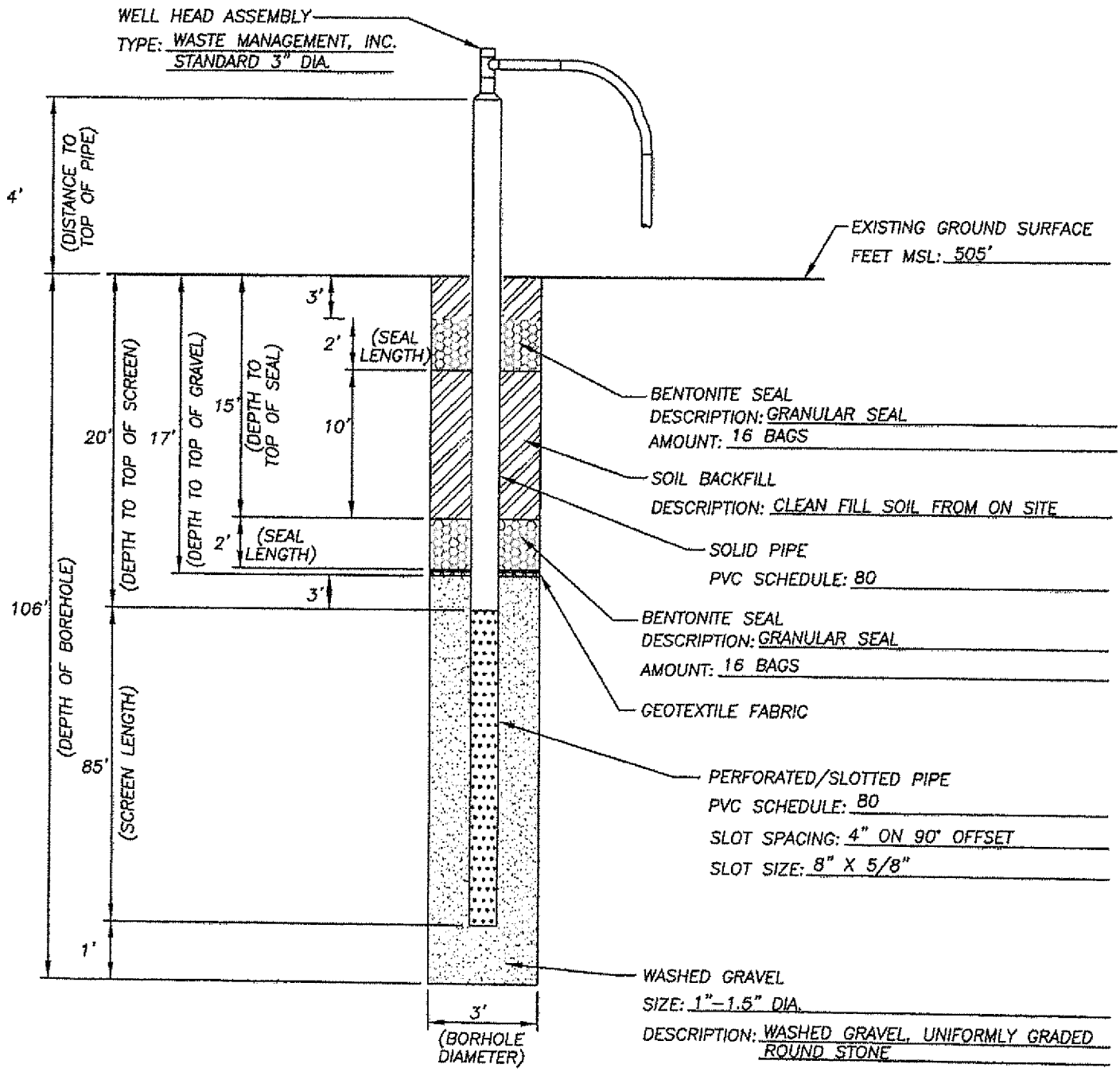
WM01458

AQUATERRA
ENVIRONMENTAL SOLUTIONS, INC.
6980 West 153rd Street
Overland Park, Kansas 66223

GAS WELL CONSTRUCTION DIAGRAM

PROJECT NUMBER: 5214.10
PROJECT NAME: 2012 COTTONWOOD HILLS GCCS CQA
GAS WELL NO.: MW80R
WELL LOCATION: 578763N 611157E
INSTALLATION START DATE: 8/15/12
COMPLETION DATE: 8/15/12
DRILLER: COLEMAN & SONS
INSPECTOR: JACLYN SMOLINSKI

COMMENTS: NOT TO SCALE



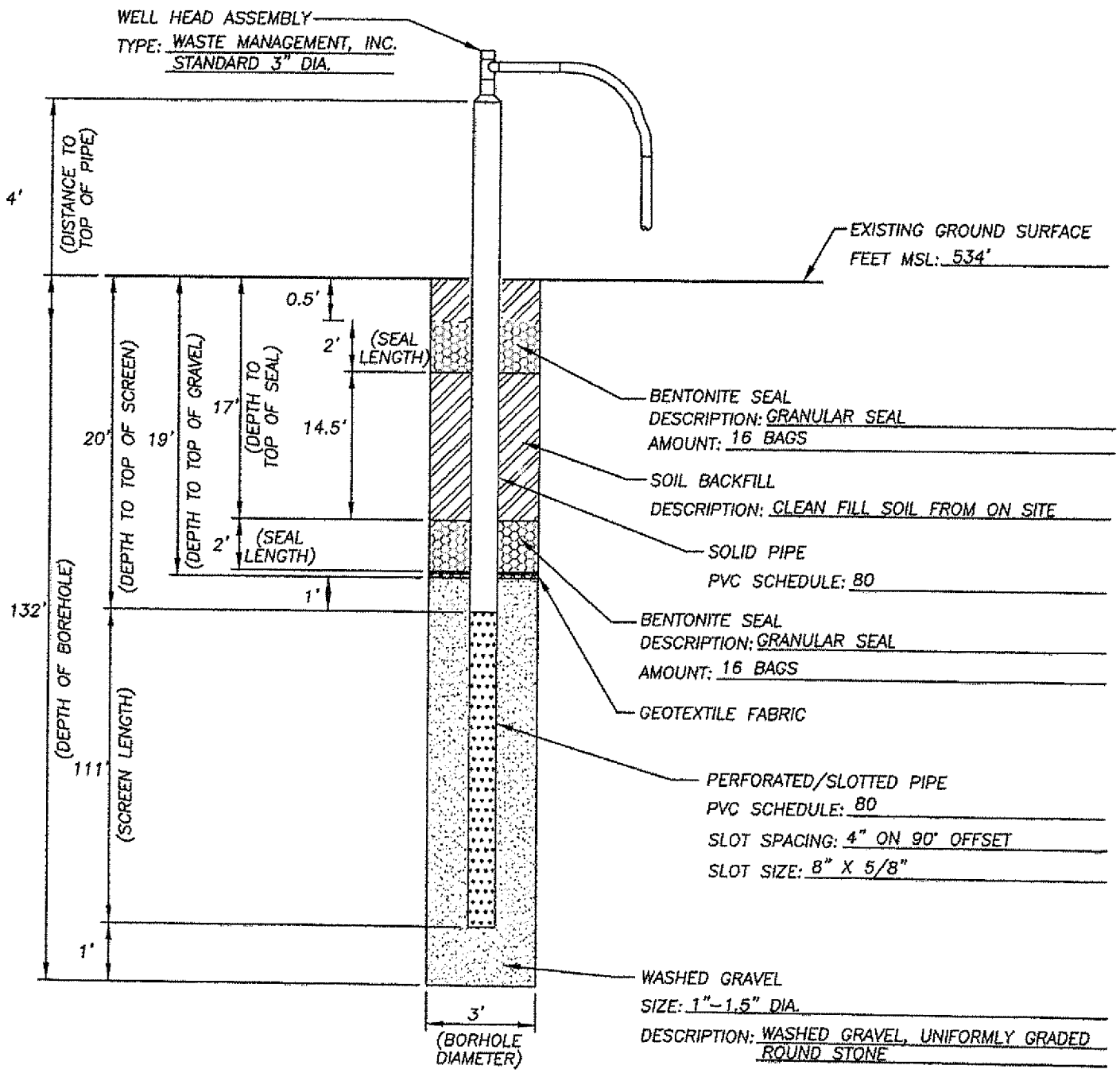
WM01459

AQUATERRA
ENVIRONMENTAL SOLUTIONS, INC.
6980 West 153rd Street
Overland Park, Kansas 66223

GAS WELL CONSTRUCTION DIAGRAM

PROJECT NUMBER: 5214.10
PROJECT NAME: 2012 COTTONWOOD HILLS GCCS CQA
GAS WELL NO.: MW81
WELL LOCATION: 579676N 611227E
INSTALLATION START DATE: 8/21/12
COMPLETION DATE: 8/21/12
DRILLER: COLEMAN & SONS
INSPECTOR: JACLYN SMOLINSKI

COMMENTS: NOT TO SCALE



WM01460

Illinois
Environmental
Protection Agency

Bureau of Land
1021 North Grand Avenue East
Box 19276
Springfield, IL 62794-9276

9/11/12

SOLID WASTE LANDFILL GROUNDWATER, LEACHATE, FACILITY AND GAS REPORTING FORM

This form must be used as a cover for the following list of notices and reports required to be submitted to the Illinois EPA's Bureau of Land, Permit Section. This form must be used for Solid Waste facilities only. Reporting for Hazardous Waste facilities should be submitted on a separate form. All reports submitted to the Illinois EPA's Bureau of Land Permit Section must contain an original, plus a minimum of two copies.

Note: This form is not to be used with permit applications. The facility's approved permit will state whether the document you are submitting is required as a report or an application.

Facility Name: Cottonwood Hills Recycling and Disposal Facility Site ID #: 1630755017
Facility Address: 10400 Hillstown Road Marissa, Illinois 62257

Check the appropriate heading. Only one heading may be checked for each corresponding submittal. Check the appropriate sub-heading, where applicable. Attach the original and all copies behind this form.

___ LPC-160 Forms

Groundwater
___ Quarterly – Indicate one: 1 2 3 4
___ Semi-Annual
___ Annual
___ Biennial

Leachate
___ Quarterly – Indicate one: 1 2 3 4
___ Semi-Annual
___ Annual
___ Biennial

___ Well Construction Information
___ Well Construction Forms, Boring Logs and/or Abandonment Forms
___ Well Survey Data (e.g., Stick-up Elevation Data)

___ Annual Groundwater Flow Evaluation

___ Notice of Observed Increase in Groundwater
Notice of Intent to Perform Confirmation Procedures (Re-sampling) in Groundwater

___ Notice of Confirmed Increase of Groundwater Exceedence from Re-sample

___ Notice of Methane Exceedences

___ Annual Facility Report (per 35 Ill. Adm. Code 813.504) and Gas Monitoring Report

___ Annual Certifications per 35 Ill. Adm. Code 813.501

XX Other (identify) Gas Collection Well Logs

ATTACHMENT 4

COTTONWOOD HILLS GAS COLLECTION SYSTEM
REPORTING FOR NON OPERATING PERIODS OF CONTROL DEVICE
3000 SCFM OPEN FLARE

Date	Time	Description of Outage	Time Back In Service	Down Time Hours	Performed By
08/22/12	1:58 PM	Header work at MW81 tie in	08/22/12 @ 4:16 PM	2.3	DY
08/24/12	7:28 AM	Header work tie in at MW16	08/24/12 @ 12:42 PM	5.2	DY
08/29/12	11:26 AM	Header work tie in wells	08/29/12 @ 14:06 PM	4.7	DY
08/31/12	7:58 AM	Decommission old well columns	08/31/12 @ 9:12 AM	1.2	DY
09/05/12	7:26 AM	Header Road Crossing	09/06/12 @ 4:56 PM	33.5	DY
09/10/12	7:40 AM	Tie in New Header	09/11/12 @ 7:44 AM	24.1	DY
09/18/12	10:26 AM	Raise 6" risers at wells	09/18/12 @ 4:38 PM	6.2	DY
09/19/12	10:36 AM	Tie in 8" Header	09/19/12 @ 12:58 PM	2.4	DY
09/20/12	1:06 PM	Tie in 8" Header	09/20/12 @ 2:52 PM	1.8	DY
09/27/12	9:52 AM	Tie in wells	09/27/12 @ 11:56 AM	2.1	DY
09/27/12	1:46 PM	Tie in wells	09/27/12 @ 2:16 PM	0.5	DY
10/09/12	2:34 PM	Flow Comp. not working	10/10/12 @ 3:28 PM	24.9	DY
10/15/12	3:24 PM	Change out flow comp.	10/15/12 @ 3:44 PM	0.3	DY
12/17/12	7:56 AM	Blower failed replaced with new blower	12/17/12 @ 3:56 PM	8.0	DY
12/18/12	2:22 PM	Nit. Tank failed reg. bad	12/19/12 @ 7:46 AM	17.4	DY
12/19/12	8:20 AM	Change out Nit. Tanks an reg.	12/19/12 @ 8:36 AM	0.3	DY
12/27/12	10:34 AM	Tie in wells	12/27/12 @ 12:20 PM	1.8	DY
			TOTAL	136.7	

Per Sec. 60.757 : "Each owner or operator...shall include the following information with the annual report... description and duration of all periods when the control device was not operating for a period exceeding one hour and length of time the control device was not operating."

Verified by :
DOUG YEARIAN Gas Technician

ATTACHMENT 5

COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
QUARTERLY SURFACE SCAN MONITORING EXCEEDENCES
FOR JULY 1, 2012 TO DECEMBER 31, 2012 REPORT PERIOD

Quarter	Date	Location		Methane	Corrective Action	Date	Methane	Additional Corrective Action	Date	Methane
		North	West	Conc ppm			Conc ppm			Conc ppm
3rd	09/10/12			All < 500	None Required			NA		
4th	10/25/12			All < 500	None Required			NA		